



ASPECTS REFERING TO TECHNICAL AND LEACHING PROPERTIES OF THE SECONDARY ALUMINIUM SLAGS - CEMENT COMPOSITES

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Abstract

The purpose of this work is to investigate the secondary Al slag (SAS) relating to its technical and environmental properties and, as consequence, to its compatibility with Portland cement matrix. This study may be a contribution to establish of SAS potential valorization as secondary raw material (SRM) in low strength cement matrix composites, as construction products.

DRX mineralogical analyses revealed that SAS includes transition alumina compounds, especial boehmite. The hydration process evolution and the hydration products nature in the Portland cement-SAS systems were studied by measurement of the Ca²⁺ concentrations and by DRX investigation. Also, was studied the ability of the Portland cement matrix to immobilize of the heavy metals contained of SAS, by a modified procedure of maximum available fraction- MAF leaching test. Conditioned SAS addition didn't disturb a positive evolution of the mortars compression strengths up to 360 days.

Key words: cement mortar; leaching properties, technical, secondary aluminium slag

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